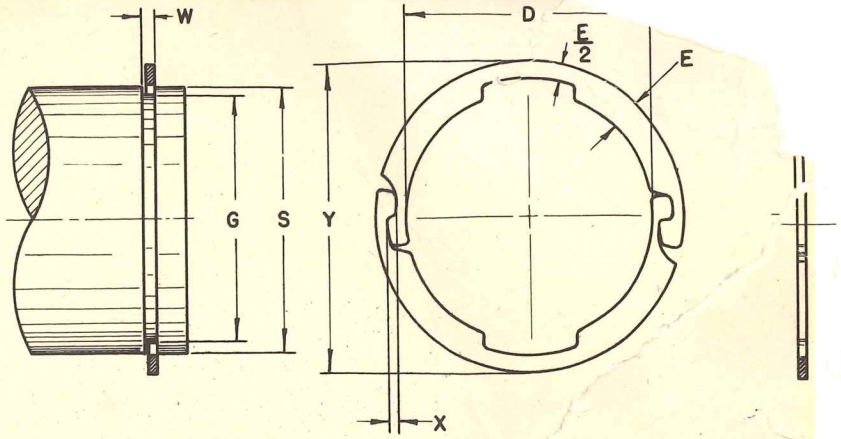
403-Split Ring Digest 55 6-65

TRUARC

U. S. PAT. RE. 18,144, OTHER PATENTS PENDING

INTERLOCKING RETAINING RINGS



DESCRIPTION:

The Waldes Truarc Interlocking Retaining Ring No. 5107 is comprised of two identical semicircular rings with inter-locking hooks at their free ends.

The halves are sprung into a groove in a shaft so that a complete circular shoulder of uniform section height is formed when the hook-like ends inter-lock.

USES:

Recommended for use where a shoulder of uniform height is desired and where the installation can be accomplished in a radial direction.

Recommended for ball bearing races having large corner radii or chamfers and in cases where ring would be subjected to high thrust loads.

FEATURES:

1) The two halves can be sprung into a groove in a radial direction.
2) Uniform section heights provide a perfect shoulder for abutting machine parts having large chamfers or corner radii.
3) The symmetry of both halves provides a balanced unit suitable for use on shafts rotating at high RPM's.
4) The positive inter-locking hooks on the free ends enable the ring to withstand high centrifugal forces.
5) The ring is designed for use in deep grooves enabling it to withstand heavy thrusts without the danger of permanent deformation of ring or groove.
6) The rings can be quickly installed, and easily removed with a screw driver.

RING No. 5107	SHAFT DIAMETER			RING DIMENSIONS						GROOVE DIMENSIONS					OUTSIDE (CLEARANCE) DIAMETER	
				FREE DIA.		THICKNESS		MAX.	HOOK	DIAMETER		WIDTH		DEPTH		
	S dec.	S inch	S mm.	D	Tol.	T	Tol.	SECT. E	WIDTH X	G	Tol.	W	TOL.		Y	T
-46	.469	15/32	12	.414		.035		.105	.030/.033	.419		.039		.025	.639	
-50	.500	1/2	13	.459	±.002	.035	±.002	.098	.016/.018	.464	±.0015	.039	+.003 -.000	.018	.670	±.
-59	.594	19/32	15	.538		.035		.105	.030	.544		.039		.025	.764	
-62	.625	5/8	16	.569		.035		.105	.033	.575		.039		.025	.795	
	.669	—	17	.593		.042		.135		.599		.046		.035	.884	
	.750	3/4	19	.673	±.003	.042	±.002	.135	.041	.680	±.002	.046	+.003	.035	.965	±.015
-78	.781	25/32	20	.703		.042		.135	.044	.711		.046	-.000	.035	.996	
-87	.875	7/8	22	.796		.042		.135		.805		.046		.035	1.090	
[-98 -(100)]	.984	63/64	25	.863		.050		.188		.872		.056		.056	1.270	
-112	1.125	1 1/8	28 1/2	1.002		.050		.188		1.013		.056		.056	1.411	
-118	1.187	1 3/16	30	1.064	±.004	.050	±.002	.188	.056	1.075	±.003	.056	+.004	.056	1.473	±.022
-125	1.250	1 1/4	32	1.126		.050		.188	.060	1.138		.056	-.000	.056	1.536	
-137	1.375	1 3/8	35	1.250		.050		.188		1.263		.056		.056	1.661	
-150	1.500	1 1/2	38	1.374		.050		.188		1.388		.056		.056	1.786	
-156	1.563	1 9/16	40	1.412		.062		.222		1.427		.068		.068	1.901	
-162	1.625	1 5/8	41	1.474	±.005	.062	±.003	.222	.066	1.489	±.005	.068	+.004	.068	1.965	±.030
[-175 -(177)]	1.750	1 3/4	44 1/2	1.597		.062		.222	.070	1.614		.068	-.000	.068	2.088	
-187	1.875	1 7/8	47 1/2	1.721		.062		.222		1.739		.068		.068	2.213	
-196	1.969	1 31/32	50	1.779		.078		.262		1.797		.086		.086	2.361	
-200	2.000	2	51	1.809		.078		.262		1.828		.086		.086	2.392	
[-212 -(215)]	2.125	2 1/8	54	1.933		.078		.262		1.953		.086		.086	2.517	
-225	2.250	2 1/4	57	2.057	±.006	.078	±.003	.262	.080	2.078	±.005	.086	+.005	.086	2.642	±.040
-237	2.375	2 3/8	60 1/2	2.180		.078		.262	.084	2.203		.086	-.000	.086	2.767	
-250	2.500	2 1/2	63 1/2	2.304		.078		.262		2.328		.086		.086	2.892	
-255	2.559	—	65	2.363		.078		.262		2.387		.086		.086	2.951	
-262	2.625	2 5/8	66 1/2	2.428		.078		.262		2.453		.086		.086	3.017	
-275	2.750	2 3/4	70	2.518		.093		.323		2.544		.103		.103	3.240	
-287	2.875	2 7/8	73	2.642		.093		.323	.098	2.669		.103		.103	3.365	
-293	2.937	2 15/16	74 1/2	2.703	±.008	.093	±.003	.323	.104	2.731	±.006	.103	+.005	.103	3.427	±.050
-300	3.000	3	76	2.754		.093		.329	.050/.055	2.782		.103	-.000	.109	3.490	
[-312 -(315)]	3.125	3 1/8	79 1/2	2.889		.093		.323	.098	2.919		.103		.103	3.615	
-325	3.250	3 1/4	82 1/2	3.013		.093		.325	.104	3.044		.103		.103	3.740	

RINGS ENCLOSED IN BRACKETS RECOMMENDED IN LIEU OF THOSE IN PARENTHESIS.
DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE.

ARMY E NAVY

WALDES KOHINOOR, INC.

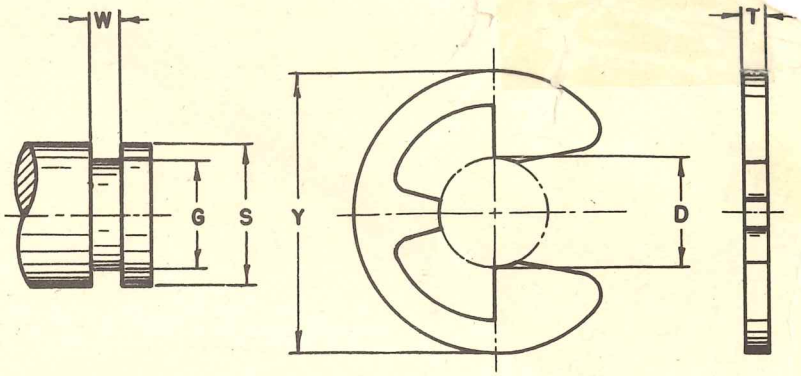
LONG ISLAND CITY 1, N. Y. TELEPHONE: IRONSIDES 6-6540

WALDES

TRUARC

REG. U. S. PAT. OFF.

"E" RETAINING RINGS



DESCRIPTION:

The WALDES TRUARC 'E' RETAINING RING NO. 5133 is an open type ring that can be sprung radially into its groove. The ring is provided with 3 equally spaced protrusions which form the contact surface in the groove. The existing recesses between the protrusions make the ring sufficiently resilient to permit the necessary spread for assembly and disassembly without giving the ring a permanent set.

FEATURES:

This type of design provides an unusually large uniform shoulder on small shafts and withstands considerable thrust loads. The ring can be easily assembled and disassembled in a radial direction without need of special tools.

USES:

Recommended for use on business machines - typewriters, adding machines and calculating machines etc. - radios, household appliances, and various types of instruments.

RING NO. 5133	SHAFT DIAMETER			RING DIMENSIONS					GROOVE DIMENSIONS				
				Free Diameter		Thickness		Outside Dia.	Diameter		Width		Depth
	S dec.	S inch	S approx. mm.	D	Tol.	T	Tol.	Y	G	Tol.	W	Tol.	
- 9	.094	3/32	2 2/5	.073	+.001 -.003	.015	±.001	.187	.074	+.002 -.000	.017	+.002 -.000	.010
-12	.125	1/8	3 1/5	.094		.015		.230	.095		.017		.015
-14s	.140	9/64	3 1/2	.100		.015		.203	.102		.017		.019
-15	.156	5/32	4	.114		.025	±.0015	.282	.116		.028	+.003 -.000	.020
-18	.187	3/16	4 3/4	.145		.025		.335	.147		.028		.020
-25	.250	1/4	6 1/2	.207		.025		.527	.210		.028		.020
-37	.375	3/8	9 1/2	.300	+.002 -.004	.035	±.002	.660	.303	+.003 -.000	.039		.036
-50	.500	1/2	13	.392		.042		.800	.396		.046		.052
-62	.625	5/8	16	.480		.042		.940	.485		.046		.070
-75	.750	3/4	19	.574	+.003 -.005	.050		1.120	.580		.056	+.004 -.000	.085
-87	.875	7/8	22	.668		.050		1.300	.675		.056		.100

Heavy type ring thickness: Rings No. 12 & 14s — .025 ±.0015; Rings No. 15 to 25 — .035 ±.002; Ring No. 37 — .042 ±.002; Rings No. 50 & 62 — .050 ±.002; Rings No. 75 & 87 — .062 ±.003

Material: Steel, SAE 1065 to 1090 or equivalent.
FINISH: Oil dipped. Parkerized, Cadmium or Zinc Plated on request.

RECOMMENDED RANGE OF SHAFT DIAMETERS OTHER THAN NOMINAL FOR "E" RINGS

RING Nº 5133	SHAFT DIAMETER			GROOVE DIMENSIONS			RING DIMENSIONS	
	S DEC.	S INCH	S APPROX. MM.	DIAMETER G	TOL.	DEPTH	MAX. SECT. HEIGHT	SHOULDER HEIGHT
18	.187	3/16	4 3/4	.147	+.002 -.000	.020	.095	.075
	.197	—	5	.147		.025	.095	.070
	.219	7/32	5 1/2	.147		.036	.095	.059
25	.236	15/64	6	.210		.018	.160	.142
	.250	1/4	6 1/2	.210		.020	.160	.140
	.275	—	7	.210		.032	.160	.128
	.281	9/32	7 1/7	.210		.035	.160	.125
	.312	5/16	8	.210		.051	.160	.109
37	.344	11/32	8 3/4	.303	+.003 -.000	.022	.180	.158
	.354	—	9	.303		.026	.180	.154
	.375	3/8	9 1/2	.303		.036	.180	.144
	.393	—	10	.303		.045	.180	.135
	.406	13/32	10 1/2	.303		.052	.180	.128
	.438	7/16	11	.303		.068	.180	.112

RING Nº 5133	SHAFT DIAMETER			GROOVE DIMENSIONS			RING DIMENSIONS	
	S DEC.	S INCH	S APPROX. MM.	DIAMETER G	TOL.	DEPTH	MAX. SECT. HEIGHT	SHOULDER HEIGHT
50	.469	15/32	12	.396	+.003 -.000	.037	.204	.167
	.500	1/2	13	.396		.052	.204	.152
	.551	—	14	.396		.078	.204	.126
	.562	9/16	14 1/2	.396		.083	.204	.121
62	.594	19/32	15	.485		.055	.230	.175
	.625	5/8	16	.485		.070	.230	.160
	.669	—	17	.485		.092	.230	.138
	.672	43/64	17	.485		.094	.230	.136
	.688	11/16	17 1/2	.485		.102	.230	.128
75	.750	3/4	19	.580		.085	.273	.188
	.781	25/32	20	.580		.100	.273	.173
	.812	13/16	21	.580		.116	.273	.157
87	.875	7/8	22	.675		.100	.316	.216
	.938	15/16	24	.675		.132	.316	.184
	.984	63/64	25	.675		.155	.316	.161
	1.000	1	25 1/2	.675		.163	.316	.153

ARMY E NAVY

WALDES KOHINOOR, INC.

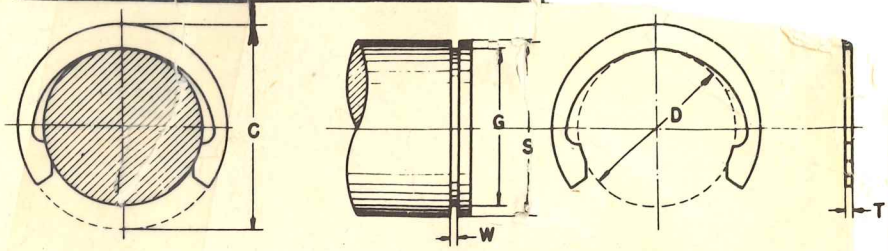
LONG ISLAND CITY 1, N. Y. TELEPHONE: IRONSIDES 6-6540

WALDES

TRUARC

CRESCENT* RETAINING RINGS

Diameter of circle "C" when ring is sprung o



U. S. PAT. 2,382,948 AND OTHER PATENTS PENDING

No. 5103

The Waldes Truarc Crescent Retaining Ring is designed with diminishing section heights from its middle section to its free ends. This feature permits the ring to retain circularity while undergoing deformation. A uniform shoulder is provided making it especially adaptable to hold or position machine parts with large chamfers or edge radii.

The ring is installed in its groove across the centerline of a shaft. The groove can be cut comparatively deeper than grooves specified for standard type Truarc rings of corresponding size.

The deep groove increases the compression strength of the groove wall and at the same time enables the ring to fit more securely under heavy thrusts.

MATERIAL: Steel, SAE 1065 - 1090 or equivalent. Ring No. 5103-12 only is made of Beryllium copper.

FINISH: Standard finish is oil-dipped. Parkerized, cadmium or zinc plated rings supplied on request.

403 - Split Ring Digest

RING No. 5103	RING DIMENSIONS: SHAFT DIAMETER S dec.	S inch	S approx. equiv. mm.	FREE DIAMETER D	Tol.	THICKNESS T	Tol.	Max. Section Height	GROOVE DIMENSIONS: DIAMETER G	Tol.	WIDTH W	Tol.	Depth	C
-12	.125	1/8	3 1/5	.101	+.002 −.004	.015	±.0013(C)	.031	.105	±.0015	.017	+.002 −.000	.010	.18
-18	.187	3/16	4 3/4	.161		.015	±.001(S)	.034	.165		.017		.011	.24
-21	.219	7/32	5 1/2	.188		.025		.039	.193		.028		013	.28
-25	.250	1/4	6 1/2	.214	+.003 −.005	.025	±.0015(S)	.045	.220	±.002	.028		.015	.32
-31	.312	5/16	8	.270		.025		.053	.276		.028		.018	.39
-37	.375	3/8	9 1/2	.328		.025		.060	.335		.028		.020	.47
-40	.406	13/32	10 1/2	.359		.025		.063	.364		.028		.021	.50
-43	.437	7/16	11	.386		.025		.065	.393		.028		.022	.53
-50	.500	1/2	13	.441	+.004 −.006	.035	±.002(S)	.070	.450	±.003	.039	+.003 −.000	.025	.60
-56	.562	9/16	14 1/3	.497		.035		.078	.507		.039		.028	.67
-62	.625	5/8	16	.553		.035		.081	.563		.039		.031	.74
-68	.687	11/16	17 1/2	.608	+.005 −.007	.042		.086	.619		.046		.034	.80
-75	.750	3/4	19	.665		.042		.090	.676		.046		.037	.87
-81	.812	13/16	21	.721		.042		.097	.732		.046		.040	.94
-87	.875	7/8	22	.777		.042		.105	.789		.046		.043	1.01
-93	.937	15/16	24	.830		.042		.112	.843		.046		.047	1.08
-100	1.000	1	25 1/2	.887		.042		.120	.900		.046		.050	1.15
-112	1.125	1 1/8	28 1/2	.997	+.006 −.008	.050		.135	1.013	±.004	.056	+.004 −.000	.056	1.30
-125	1.250	1 1/4	32	1.110		.050		.150	1.126		.056		.062	1.44
-137	1.375	1 3/8	35	1.220		.050		.165	1.237		.056		.069	1.58
-150	1.500	1 1/2	38	1.331		.050		.180	1.350		.056		.075	1.72
-162	1.625	1 5/8	41	1.443	+.007 −.009	.062	±.003(S)	.195	1.463	±.005	.068		.081	1.87
-175	1.750	1 3/4	44 1/2	1.555		.062		.210	1.576		.068		.087	2.01
-187	1.875	1 7/8	47 1/2	1.667		.062		.225	1.689		.068		.093	2.15
-200	2.000	2	51	1.777		.062		.240	1.800		.068		.100	2.30

RING THICKNESSES OF HEAVY TYPE TRUARC CRESCENT RETAINING RINGS

Ring Nos. 31 through 43—.035 ± .002

Ring Nos. 50 through 62—.042 ± .002
Ring Nos. 68 through 100—.050 ± .002

Ring Nos. 112 through 150—.062 ± .003
Ring Nos. 162 through 200—.078 ± .003

n U.S.A.

WALDES KOHINOOR, INC.

LONG ISLAND CITY 1, N. Y. TELEPHONE IRONSIDES 6-6540

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